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CAPITAL RESERVE ANALYSTS, INC.

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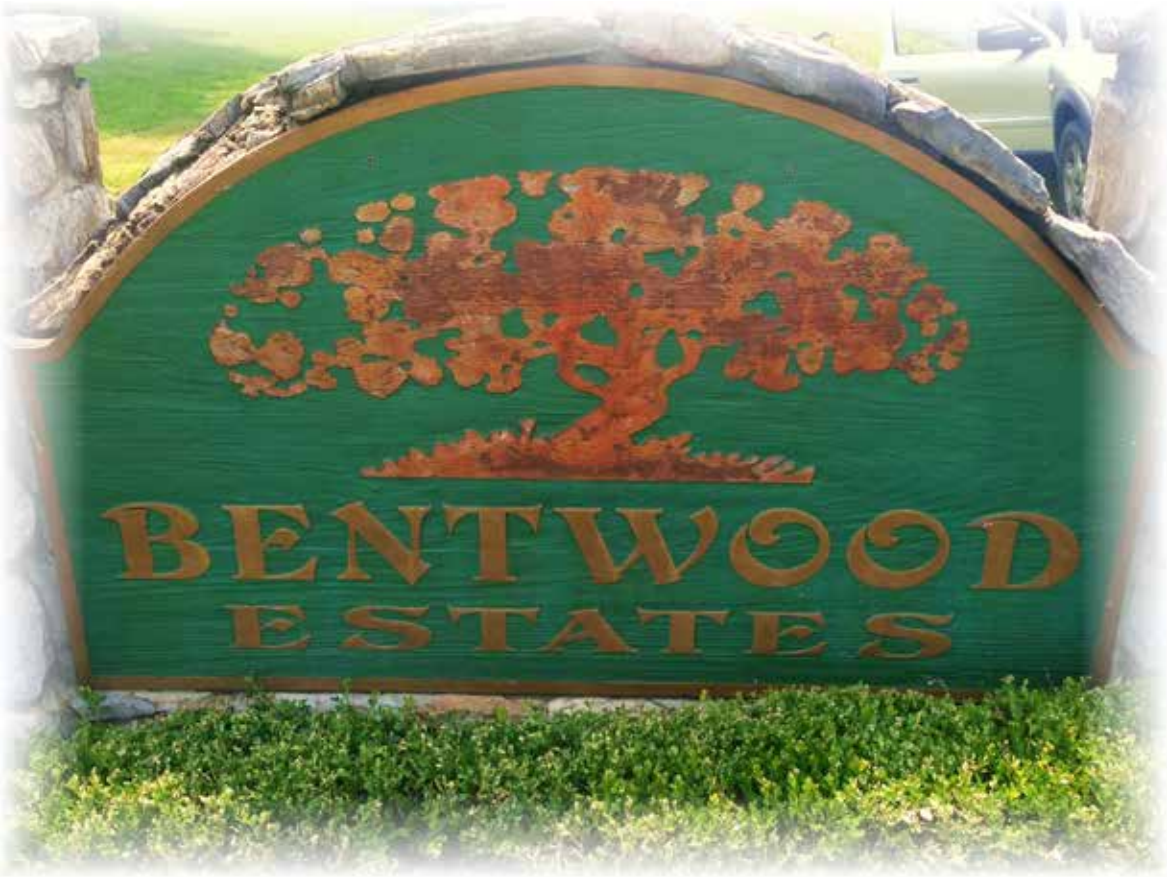
Condition Assessment
&
Reserve Fund Plan
2015
Bentwood Estates
Inwood, West Virginia



Prepared for:
The Board of Directors

MASON & MASON

CAPITAL RESERVE ANALYSTS, INC.

MEMBER OF community ASSOCIATIONS INSTITUTE

P. O. Box 1 Fort Valley, Virginia 22652 800-776-6980 admin@masonreserves.com Fax 800-776-6408

August 25, 2014

Mr. John Swauger, Treasurer
Bentwood Estates Homeowners Association, Inc.
P. O. Box 72
Inwood, West Virginia 25428

RE: CONDITION ASSESSMENT AND RESERVE FUND PLAN 2015
Bentwood Estates Homeowners Association, Inc.
Inwood, West Virginia
Project No. 7730

Dear Mr. Swauger:

Mason & Mason Capital Reserve Analysts, Inc. has completed the report for Bentwood Estates.

As outlined in our proposal, the report is being submitted to you and the Board of Directors for review and comment. A review of the Summary of Key Issues iii, and Sections 1 and 2 will provide you with our findings and financial analyses. We will be happy to meet with the Board to help them fully understand the issues. If no changes are necessary, please consider this version the final report. If changes are requested, Mason & Mason will make the revisions and re-issue the report. We encourage the Board to complete this process expeditiously and will support the effort.

We genuinely appreciate the opportunity to work with you and the Association.

Sincerely,

Mason & Mason Capital Reserve Analysts, Inc.

Levi K. Mason, R.S.
Reserve Anylist

LEVI K. MASON CAI-RS 00213 DESIGNATION RESERVE SPECIALIST

James G. Mason, R. S.
Principal

JAMES G. MASON CAI-RS 00010 DESIGNATION RESERVE SPECIALIST

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FOREWORD

PLEASE READ THIS FIRST

This report contains information the Board requires to fulfill its fiduciary responsibilities with respect to the financial health of the Association. Even if you are already familiar with the concepts of capital reserve planning, it requires some study. The information in this report is vital to your Association's financial health. Unless you understand it, your Association may not follow it. This may lead to underfunding and financial stress at some time in the future.

Our years of experience providing reserve analysis to both first-time and multi-update return clients have compelled us to develop a logical funding approach, which is based on generational equity and fairness to common-interest property owners that helps ensure realistic reserve funding levels.

Our approach is neither standard, nor is it necessarily easy to understand without first becoming familiar with some basic concepts. Section 3 explains these concepts in more detail. We want you to understand them because a well-informed Association makes the best decisions for its common-property owners.

SUMMARY OF KEY ISSUES

Different readers will look for different things from this report. Perhaps the homeowner will just be looking for the high points. A prospective buyer may be looking at the general financial condition of the Association's reserves. A Board member should probe deeper in order to understand the financial tools that will be helpful in fulfilling their fiduciary responsibilities to the Association.

The Summary of Key Issues presents a recapitulation of the most important findings of Bentwood Estates' Reserve Fund Plan. Each is discussed in greater detail in the body of the report. We encourage the reader to "go deeper" into the report, and we have written it in a way that's understandable to a first-time reader.

Analyzing the capital reserves reveals that:

- A reserve contribution has not been established. Our goal is to become fully funded by the end of the 20-year period (2034).

In order to achieve this goal the Association should:

- Establish the annual contribution in 2015 at $21,574, and plan on annual increases of 2.50% to reflect inflation thereafter.
- This represents a contribution of $12.57 per residential unit, per month (based on 143 homes at build-out).

Supporting data are contained in the body of this report, and we encourage the reader to take the time to understand it.

VISUAL EVALUATION METHODOLOGY

The first step in the process is collection of specific data on each of your community's commonly-held components. This information includes quantity and condition of each included component. We collect most of this data during the on-site field survey. When this information is not available in the field, we may obtain it by discussion with those knowledgeable through management or service activities.

The field survey or condition assessment is visual and non-invasive. We don't perform destructive testing to uncover hidden conditions; perform operational testing of mechanical, electrical, plumbing, fire and life safety protection; or perform code compliance analysis.

We make no warranty that every defect has been identified. Our scope of work doesn't include an evaluation of moisture penetration, mold, indoor air quality, or other environmental issues. While we may identify safety hazards observed during the course of the field survey, this report shouldn't be considered a safety evaluation of components.

Replacement costs are sometimes based on published references, such as R. S. Means. However, our opinions of replacement costs usually include removal and disposal and are usually based on experience with similar projects including information provided by local contractors and reported client experience. Actual construction costs can vary significantly due to seasonal considerations, material availability, labor, economy of scale, and other factors beyond our control.

Projected useful service lives are based on statistical data and our opinion of their current visual condition. No guarantee of component service life expectancies are expressed or implied and none should be inferred by this report. Your actual experience in replacing components may differ significantly from the projections in the report, because of conditions beyond our control or that were not visually apparent at the time of the survey.

1. INTRODUCTION

1.1 Background: Bentwood Estates Homeowners Association, Inc. is comprised of 120 single-family homes (143 planned at build-out) located on Gerrardstown Road in Inwood, West Virginia. The community was constructed in 1997, 2005, and 2011 to present. Seven private streets, Bentley Drive, Bugatti Court, Corvair Lane, Ghia Court, Laguna Road, Shelby Road, and Viper Road, are within the community.

We are providing the Condition Assessment and Reserve Fund Plan based on Proposal Acceptance Agreement No. 7730 dated June 22, 2014. Our services are subject to all terms and conditions specified therein.

Mason & Mason did not review the declarations, covenants, or other organization documents pertaining to the establishment and governance of the Homeowners Association. Ultimately, the establishment, management, and expenditure of reserves are within the discretion of the Association and its Board of Directors pursuant to their organizational documents and subject to the laws of the applicable jurisdiction. We are not otherwise financially associated with the Association and we therefore do not have any conflicts of interest that would bias this report. Information provided by Bentwood Estates is deemed reliable. This report is not intended to be an audit or a forensic investigation. This report is not a mandate, but is intended to be a guide for future planning.

Levi K. Mason, R. S. conducted the field evaluation for this Level I report on August 7, 2014. The weather was clear and the temperature was approximately 80 degrees F. Precipitation had not occurred for several days prior to the site visit. The pavements, walkways, and grounds were generally dry and clean of debris.

1.2 Principal Findings: The common assets appear to be in overall good condition. The community is still under construction, and the primary component, the asphalt drivelanes have not received a complete wear course. However, we observed wide area deflection and cracking of the base course. In several locations, complete failure was observed, such as at the first section of Bugatti Court. It is our opinion that the sub-base and base course must be repaired prior to the application of the wear course. If the repairs are not completed, reflective cracking will occur resulting in early failure of the asphalt. We observed approximately 5.5% of the surface area is deflected and repair cost estimates range between $45,000 and $50,000. We recommend a professional engineer be consulted to confirm the preliminary estimate and to better provide guidance on repairing the drivelanes. For the purposes of this report, we have assumed the asphalt will be properly repaired and the surface course applied in 2016. A service life of approximately 18 years can be anticipated, and has been scheduled as such. Since the depth of the asphalt and sub-base is unknown and of questionable integrity, it will be critical that full depth repairs and crack filling projects are completed routinely throughout the service life of the asphalt.

The entrance monument appears to be in fair condition, with some loose coping stones. We have scheduled a repair project near-term to address the current deficiencies. The signs and posts appear to be in good condition. We have scheduled partial replacement projects throughout the study period. The storm water drainage system appears to be properly sized for the location. No areas of erosion were observed.

Financially, the level of contribution is comparable to similarly sized communities in the Panhandle. It is important for the Association to be proactive in funding reserves due to the quantity of asphalt involved.

In order to maintain the physical attributes that preserve property values and provide a safe environment for occupants and guests, a series of capital expenditures should be anticipated. Consequently, we have scheduled near-, mid-, and late-term restoration and replacement projects based on anticipated need from our experience with similar properties.

Generally, our approach is to group appropriately related component replacement items into projects. This creates a more realistic model and allows a grouping time line that is more convenient to schedule and logical to accomplish. Please see the Table 1 Discussion, Column 18, and the Asphalt Pavement Report in Section 7, for specific information.

2. FINANCIAL ANALYSIS

We are currently in unprecedented financial times. Previous standardized methods for determining or projecting inflation and interest income are not currently reliable. Recent inflation experience has surpassed government CPI and construction cost sources. This appears to result from a combination of factors, particularly wage rates and demand for services. We track the inflation rate among our clients based on their reported costs for typical services. A 3.5% annual rate reflects their general experience over the past decade. However, currently we are seeing somewhat lower rates and we are using 3%. Interest income has dropped substantially, and many smaller Associations are reduced to savings accounts or certificates of deposit, which are yielding only 1% to 2%.

Unlike reserves, interest income is taxable, so this further reduces the net gain. The combination of ever higher costs and lower interest income is driving reserve funding requirements substantially higher. It is impossible to forecast whether anticipated lower demand will help reduce or stabilize costs in the future. You can only delay repairs for so long.

During these times, it is prudent to keep a close watch on the economy and be ready to respond by updating the reserve fund plan as economic changes dictate.

Since asphalt pavement is particularly sensitive to oil costs and is generally the single most expensive component in many communities who own their streets, reserve fund plan pavement costs should be adjusted periodically to reflect market conditions. Gasoline prices do not necessarily reflect asphalt prices. Refinery practices combined with government plans for massive infrastructure projects will most likely result in continued shortages and subsequent higher costs for both asphalt and concrete products.

2.1 Calculation Basics: The Association is on a calendar fiscal year. Management reported that no reserve fund currently exists. We have used a 1.00% annual interest income factor and a 2.50% inflation factor in calculations. The total expenditures for the twenty-year period for both the Cash Flow Method and Component Method are projected to be $528,160.

2.2 Funding Analysis, Cash Flow Method Hybrid Approach (Table 3): The 2015 annual contribution to reserves has been set at $21,574 with a presumed 2.5% annual increase. At this level, the total for all annual contributions for the twenty-year period would be $551,109, and the total interest income is projected to be $43,878. This plan allows for a gradual increase over time and addresses generational equity issues. The fully funded balance in 2034 is $66,827.

2.3 Funding Analysis, Component Method (Table 4): This method of funding would require variable annual contributions, averaging $27,413 over the twenty-year period. The total for all annual contributions would be $548,266, and the total interest income is projected to be $46,721. The fully funded balance in 2034 is $66,827. The Component Method model considers the current reserve fund balance in computing individual component contributions for current cycles. The Component Method model distributes the current reserve fund balance proportionally to all components prior to calculating the individual component contributions for each component cycle.

3. METHODS OF FUNDING

Once the data are compiled, our proprietary software produces two distinct funding methods. These are the Component Method and Cash Flow Method. Each of these methods is used in analyzing your Association's reserve status and each plays a role in the Board's decision on how to fund reserves. While we provide the guidance, the choice of funding method is ultimately the prerogative of the Board. Considering the vulnerability of the Association's assets, its risk tolerance, and its ability to fund contributions, the Board should decide how the Association will fund its reserves and at what level.

3.1 Component Method: As reserve analysts, we recognize the value of Component Method calculations as they address both future replacement costs and the time remaining to fund them. This is the foundation of the savings concept. You will see the term "fully funded." This simply means you are on schedule, in any given year, to accrue sufficient funds by the component's replacement date. It does not mean you must have 100% of the funds ahead of time. Simplified Example: A component projected to cost $1,000 at the end of its 10-year life cycle would require a $100 annual contribution in each of the 10 years. As long as you follow this contribution plan, the component is "fully funded."

Prior to determining the actual required annual contribution, a complex calculation apportions the existing reserve fund to each component. Each component's remaining unfunded balance forms the basis for the required contribution going forward.

Funds set aside for replacement of individual components are not normally used for the replacement of other components, even though the funds reside in the same bank account. In rare cases where a reserve fund is actually overfunded, $0 will be displayed on the Component Method tables, indicating that the component is fully funded for that cycle.

While the time basis for the report is a 20-year period, the Component Method allows for inclusion of long-life components that may require replacement after the specified period. This allows for funding of long-life components contemporaneously, which is fundamentally fair if they are serving the current owners. This is in contrast to saying "if it doesn't require replacement within our 20-year period, we're going to ignore it."

Due to replacement cycle time and cost differentials, the Component Method typically results in annual contribution fluctuations, which often makes it difficult for a Board to implement. However, its guidance is essential and invaluable for understanding funding liabilities and making informed recommendations.

Table 4 shows these calculations, as well as projects interest income, expenses with inflation, and yearly balances, which will be "fully funded."

3.2 Cash Flow Method: The Cash Flow Method is easier to implement. It is a simple 20-year spread sheet that includes the starting balance, current contribution, interest income, inflation rate, projected expenses, and resulting yearly balances. The Cash Flow Method pools the contributions allocated to each of the Association's common components into a single "account."

Table 3 shows these calculations. This table reflects the information you provided on your reserve fund balance and current contribution. It also shows projected yearly positive or negative balances. The Cash Flow Method doesn't include replacement funding for anything beyond the 20-year period, thus leaving a potential shortfall in funding and failing to address generational equity if not specifically set to do so. It doesn't provide any real guidance beyond the basic information. There are several variations on cash flow goals such as Threshold Funding (just enough to stay positive) and Percentage Funding (a predetermined level based on some arbitrary percentage), but these schemes don't address the reality of fully funding, and typically are just a way of passing the obligation on to the next generation.

3.3 Hybrid Approach: Please note that this is not a method, rather a way (approach) for us to utilize the Cash Flow Method, while insuring the appropriate funding levels are achieved long-term. Our Hybrid Approach uses the projected fully funded balance at the end of the 20-year period from Table 4 as a funding goal. We then set up Cash Flow funding plans. Table 3 is your "where we are now" Cash Flow spreadsheet modeling your reserve balance and current contribution. Table 3.1 (and possibly others) provides alternative(s) to this that meet the fully funded goal from Table 4.

We usually establish a new Cash Flow contribution that requires only small annual inflationary increases to reach the fully funded goal at the end of the 20-year period. This has the added effect of establishing a funding plan that addresses inflation. The contribution in the first year, adjusted for inflation, is equal to the contribution in the last year, based on inflated dollars (future value of money). This approach will also allow underfunded Associations the time to catch up, mitigating undue hardships. It balances the risk of temporary underfunding with the benefit of consistent predictable increasing contributions. The combination of the Component and Cash Flow Methods (Hybrid Approach) provides the advantages of both methods.

4. RESERVE PROGRAMMING

The Mason & Mason proprietary software used to produce the financial tables (Tables 1 through 4) have been under continual refinement for over a decade. It is unique in the industry as it provides comprehensive modeling through Microsoft Access and Excel that addresses the many challenges of reserve funding, allows analysts and clients to run "what if" scenarios, provides an easy to understand matrix of views and functions, and is easily provided to clients through e-mail.

4.1 Interest Income on Reserve Funds: Most Associations invest at least part of their reserve funds. Small Associations may simply use a savings account or certificates of deposit, while large Associations may have multiple investments with short-, medium-, and long-term instruments. One issue that is difficult to quantify is the percentage of funds invested. Some Associations invest a fairly substantial portion, while others hold back due to current cash outflow obligations. Some Associations do not reinvest the investment proceeds in their reserves; rather they divert the cash into their operations fund. We do not agree with this approach as it has the effect of requiring additional reserve contributions to make up for the difference. There is also the issue of changing rates over the 20-year period. In the recent past we have seen large swings in relatively short time periods. While reserve funds are not usually taxable by the IRS, the investment income generated by the reserve fund is taxable in most situations. Even with all these potential pitfalls, investment income still represents a substantial source of additional funds and for this reason should not be ignored. There is no way to make "one size fits all" with any accuracy for the individual Association. Our approach to this dilemma is to use lower approximations that compensate for less than 100% of funds invested. We feel this is still better than not recognizing it, and periodic updates allow for adjustments based on experience. The rate can be set at any level, including zero, for Associations desiring to not recognize interest. The rate should reflect, as accurately as possible, the actual composite rate of return on all securities and other instruments of investment including allowances for taxes.

The interest income displayed on Table 3 and Table 4 is the summation of the beginning reserve fund interest accrual and the interest earned on the contributions minus the interest lost by withdrawing the capital expenditures. This method of calculation, while not exact, approximates the averages of the three principal components of a reserve fund for each twelve-month period.

4.2 Future Replacement Costs (Inflation): Inflation is a fact of life. In order to replicate future financial conditions as accurately as possible, inflation on replacement costs should be recognized. The financial tables have been programmed to calculate inflation based upon a pre-determined rate. This rate can be set at any level, including zero. A plan that doesn't include inflation is a 1-year plan, and any data beyond that first year won't reflect reality.

4.3 Simultaneous Funding: This is a method of calculating funding for multiple replacement cycles of a single component over a period of time from the same starting date. Simple Example: Funding for a re-roofing project, while, at the same time, funding for a second, subsequent re-roofing project. This method serves a special purpose if multiple-phase projects are all near-term, but will result in higher annual contribution requirements and leads to generational equity issues otherwise. We use this type of programming only in special circumstances.

4.4 Sequential Funding: This is a method of calculating funding for multiple replacement cycles of a single component over a period of time where each funding cycle begins when the previous cycle ends. Simple Example: Funding for the second re-roofing project begins after the completion of the initial re-roofing project. This method of funding appears to be fundamentally equitable. We use this type of programming except in special circumstances.

4.5 Normal Replacement: Components are scheduled for complete replacement at the end of their useful service lives. Simple Example: An entrance sign is generally replaced all at once.

4.6 Cyclic Replacement: Components are replaced in stages over a period of time. Simple Example: Deficient sidewalk panels are typically replaced individually as a small percentage, rather than the complete system.

4.7 Minor Components: A minimum component value is usually established for inclusion in the reserve fund. Components of insignificant value in relation to the scale of the Association shouldn't be included and should be deferred to the operations budget. A small Association might exclude components with aggregate values less than $1,000, while a large Association might exclude components with aggregate values of less than $10,000. Including many small components tends to over complicate the plan and doesn't provide any relative value or utility.

4.8 Long Life Components: Almost all Associations have some components with long or very long useful service lives typically ranging between thirty and sixty years. Traditionally, this type of component has been ignored completely. Simple Example: Single replacement components such as entrance monuments should be programmed for full replacement at their statistical service life. This allows for all common property owners to pay their fair share during the time the component serves them. This also has the added effect of reducing the funding burden significantly as it is carried over many years.

4.9 Projected Useful Service Life: Useful service lives of components are established using construction industry standards and our local experience as a guideline. Useful service lives can vary greatly due to initial quality and installation, inappropriate materials, maintenance practices or lack thereof, environment, parts attrition, and obsolescence. By visual observation, the projected useful service life may be shortened or extended due to the present condition. The projected useful service life is not a mandate, but a guideline, for anticipating when a component will require replacement and how many years remain to fund it.

4.10 Generational Equity: As the term applies to reserves, it is the state of fairness between and over the generations relating to responsibility for assets you are utilizing during your time of ownership. It is neither reasonable, nor good business to defer current liabilities to future owners. This practice is not only unfair; it can also have a very negative impact on future property values.

5. UPDATING THE RESERVE FUND PLAN

A reserve fund plan should be periodically updated to remain a viable planning tool. Changing financial conditions and widely varying aging patterns of components dictate that revisions should be undertaken periodically from one to five years, depending upon the complexity of the common assets and the age of the community. Weather, which is unpredictable, plays a large part in the aging process.

Full Updates (Level II) include a site visit to observe current conditions. These updates include adjustments to the component inventory, replacement schedules, annual contributions, balances, replacement costs, inflation rates, and interest income.

We encourage Associations that are undergoing multiple simultaneous or sequential costly restoration projects (usually high rise buildings) to perform Level III Administrative Updates. Administrative updates do not include a condition assessment. They are accomplished by comparing original projections with actual experience during the interim period as reported by Management. These updates can be performed annually and include adjustments to the replacement schedules, contributions, balances, replacement costs, inflation rates, and interest income. The Level III Administrative Update can be a cost-effective way of keeping current between Level II Full Update cycles. Full Updates (Level II) and Administrative Updates (Level III) help to ensure the integrity of the reserve fund plan.

6. PREVENTIVE MAINTENANCE

The following preventive maintenance practices are suggested to assist the Association in the development of a routine maintenance program. The recommendations are not to be considered the only maintenance required, but should be included in an overall program. The development of a maintenance checklist and an annual condition survey will help extend the useful service lives of the Association's assets.

This section includes best maintenance practices or life-extension maintenance for many, but not necessarily all, components in the report. Items for which no maintenance is necessary, appropriate or beyond the purview of this report are not included in this section. We typically include them for townhomes and garden condominiums while mid- and high-rise buildings are generally too complex.

6.1 Asphalt Pavement: Pavement maintenance is the routine work performed to keep a pavement, subjected to normal traffic and the ordinary forces of nature, as close as possible to its as-constructed condition. Asphalt overlays may be used to correct both surface deficiencies and structural deficiencies. Surface deficiencies in asphalt pavement usually are corrected by thin resurfacing, but structural deficiencies require overlays designed on factors such as pavement properties and traffic loading. Any needed full-depth repairs and crack filling should be accomplished prior to overlaying. The edgemill and overlay process includes milling the edges of the pavement at the concrete gutter and feathering the depth of cut toward the center of the drive lane. Milling around meter heads and utility features is sometimes required. The typical useful life for an asphalt overlay is twenty years.

6.2 Asphalt Full-Depth Repairs: In areas where significant alligator cracking, potholes, or deflection of the pavement surface develops, the existing asphalt surface should be removed to the stone base course and the pavement section replaced with new asphalt. Generally, this type of failure is directly associated with the strength of the base course. When the pavement is first constructed, the stone base consists of a specific grain size distribution that provides strength and rigidity to the pavement section. Over time, the stone base course can become contaminated with fine-grained soil particles from the supporting soils beneath the base course. The most positive repair to such an area is to remove the contaminated base course and replace it with new base stone to the design depth. It is appropriate to perform these types of repairs immediately prior to asphalt restoration projects. Generally, this type of repair should not be required for approximately five years after an asphalt restoration project.

6.3 Asphalt Crack Filling: Cracks that develop throughout the life of the asphalt should be thoroughly cleaned of plant growth and debris (lanced) and then filled with a rubberized asphalt crack sealant. If the crack surfaces are not properly prepared, the sealant will not adhere. Crack filling should be accomplished every three to six years to prevent infiltration of water through the asphalt into the sub-grade, causing damage to the road base. It is appropriate to perform these types of repairs immediately prior to edgemill and overlay. Generally, this type of repair should not be required for approximately five years after an edgemill and overlay project.

6.4 Entrance Signage: The wood components of entrance signs should be periodically cleaned of loose paint, lamination cracks should be re-sealed, and the sign repainted to maintain appearance. Out-of-plumb posts should be straightened and secured.

6.5 Street Signage: Metal perforated-post and pressure-treated wood post street signs generally require very little maintenance over their useful service life. Signage tends to fade due to environmental exposure. Cleaning of peeled paint, periodic cleaning of rust (metal posts) and repainting of wood and metal posts will maintain appearance. There is little that can be done with the signs except to replace them periodically. The wood components of entrance signs should be periodically cleaned of loose paint and repainted to maintain appearance. Out-of-plumb posts should be straightened and secured.

6.6 Stone Components: Stone components should be inspected periodically for step cracks in the mortar and shear cracks through the stone and mortar, indicating settlement problems. Signs of efflorescence on the stone face and mortar or spalling stone faces indicate water infiltration and should be investigated. Water infiltration problems are usually initiated at the top of an improperly sealed coping. Eliminating the infiltration of water into the wall from the coping can be accomplished by various methods, depending on the stone detail. Installation of a metal coping is sometimes a cost-effective method of solving these problems and extending the life of the wall. Sealing of stone surfaces with breathable coatings will also extend the useful service life of the stone. All vegetation, such as vines or tree limbs should be kept clear of the wall to prevent damage.

6.7 Tree Trimming, Removal, and Replacement: As communities age, trees, both native and planted, may become problematic if periodic care is not accomplished. Trees may become damaged by weather or disease, or they may outsize their location. Proper, diligent tree trimming may alleviate future problems with regard to damage to adjacent structures. Proper tree trimming also helps maintain a healthy tree and may reduce windage in inclement weather. Proper tree trimming should not be confused with the common practice of topping, which produces not only an unattractive tree, but also an unhealthy one due to weakening of the root structure. Tree root damage of asphalt footpaths and sidewalks is also a common problem. The best solution is re-routing the adjacent structure, if possible, to prevent future damage. If re-routing is not possible, tree roots causing the damage may be pruned back when replacement of the damaged component is accomplished. The practice of moderate mulching is beneficial for trees. However, repeated mulching against the tree trunk, year after year, without removal of the old mulch can eventually kill trees by trapping moisture against the bark, allowing fungi and insects to easily infiltrate the tree. Mulch should be placed around trees to the drip line, but should not be touching the bark.

7. ASPHALT PAVEMENT REPORT

Street Name	Total SY Asphalt	SY Full-Depth Repairs	Linear Footage Cracks
Bentley Drive Section I (End to Ghia Court)	2,085	333	2,559
Bentley Drive Section II (Ghia Court to 560 Bentley)	1,686	200	345
Bentley Drive Section III (560 Bentley to Laguna Rd)	1,474	4	0
Bentley Drive Section IV (Laguna Rd to 311 Bentley)	1,241	30	254
Bentley Drive Section V (311 Bentley to Rt. 51)*	4,170	0	0
Laguna Road	640	14	131
Corvair Lane	2,166	231	1,329
Viper Road	1,131	16	694
Shelby Road	2,456	0	0
Ghia Court	547	36	224
Bugatti Court**	2,082	225	502
TOTALS	19,678	1,089	6,038

All quantities approximate
*Appears to be the only section to have received the final surface course.
**401 Square Yards has not been paved

COMPONENT DATA AND ASSET REPLACEMENT SCHEDULE
TABLE 1 EXPLANATION

This table lists the common assets included in the reserve fund plan and provides details of the replacement schedules. A narrative discussion is provided adjacent to each component. Photo references and maintenance protocol reference numbers are also provided. An explanation of each column in the table follows:

Column 1	**Component No.** is consistent throughout all tables.
Column 2	**Component** is a brief description of the component.
Column 3	**Quantity** of the component studied, which may be an exact number, a rough estimate, or simply a (1) if the expenditure forecast is a lump sum allowance for replacement of an unquantified component.
Column 4	**Unit of Measurement** used to quantify the component: SY = Square Yards SF = Square Feet LF = Linear Feet EA = Each LS = Lump Sum PR = Pair CY = Cubic Yards
Column 5	**Unit Cost** used to calculate the required expenditure. This unit cost includes removal of existing components and installation of new components, including materials, labor, and overhead and profit for the contractor.
Column 6	**Total Asset Base** is the total value of common assets included in the study in current dollars. In addition to capital assets, this figure includes one cycle of maintenance liability.
Column 7	**Typical Service Life (Yrs) or Cycle** is the typical life expectancy of similar components in average conditions or the length of years between replacement cycles, and does not necessarily reflect the conditions observed during the field evaluation. This number is furnished for reference and is not necessarily computed in the system.
Column 8	**1st Cycle Year** is the scheduled year of the first projected replacement or repair.
Column 9	**Percentage of Replacement** is the percentage of component value to be replaced in the first replacement cycle.
Column 10	**Cost for 1st Cycle** is the future cost (with inflation) of the replacement. It is the product of Column 6 times Column 9 in future dollars.
Column 11	**2nd Cycle Year** is the scheduled year of the second projected replacement or repair. If a second cycle is not listed, it is because the first cycle is beyond the end of the study.
Column 12	**Percentage of Replacement** is the percentage of component value to be replaced in the second replacement cycle. This can vary from the percentage of the first cycle for various reasons, such as the increased age of a component may require a larger amount of repair.
Columns 13 Through 16	**Cycles, Percentage, and Cost** repeat as itemized above. Although not shown on the tables, the cycles continue throughout the study period and beyond.
Column 18	**Discussion** is the description and observed condition of the component and the methodology employed in the decision-making process. Includes the photo reference, **(Photo #1, #2, etc.)** and Maintenance Protocol reference numbers **(7.1, 7.2 etc.)** if applicable.

Reserve Fund Plan for
BENTWOOD ESTATES HOMEOWNERS
ASSOCIATION, INC.
Inwood, West Virginia

COMPONENT DATA AND ASSET REPLACEMENT SCHEDULE
TABLE 1
2015 Through 2034

MASON & MASON
CAPITAL RESERVE ANALYSTS, INC.
www.masonreserves.com 800-776-6980 Fax 800-776-6408

Component No.	Component	Quantity	Unit of Measurement	Unit Cost	Total Asset Base	Typical Service or Cycle Life in Yrs	1st Cycle Year	Percentage of Replacement	Cost For 1st Cycle	2nd Cycle Year	Percentage of Replacement	Cost For 2nd Cycle	3rd Cycle Year	Percentage of Replacement	Cost For 3rd Cycle	DISCUSSION
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	18
1 ASPHALT COMPONENTS																
1.1	**Asphalt Restoration Project**	**19,678**	**SY**	**$12.00**	**$236,136**	**18**	**2034**	**100%**	**$377,499**	**2052**	**100%**	**$588,769**				**This category includes the drivelanes. The current unfinished pavement is in generally poor condition. We observed wide area deflection and cracking, indicative of sub-base failure. We understand that the majority of the asphalt has not received the final wear course of asphalt. However, it is our opinion that the current base course must be repaired prior to the application of the wear course in order to achieve a full service life of the asphalt. We recommend an professional engineer be consulted to further determine the extent of the repairs necessary, generate a repair budget, and project schedule. The thickness of the pavement could not be visually determined. Restoration includes edgemilling and overlay with 1-½" new compacted asphalt. Core sampling should be used to determine the depth and condition of the sub-base and pavement prior to restoration. Costs include re-striping, but not replacement of any inadequate sub-base. A full service life is dependent on preventative maintenance being performed.**
1.2	**Asphalt Repair Allowance**	**1**	**EA**	**$40,000.00**	**$40,000**	**6**	**2022**	**33%**	**$15,691**	**2028**	**66%**	**$36,393**	**2034**	**100%**	**$63,946**	**A significant amount of deflected pavement (approximately 1,089 square yards or 5.5%), indicative of sub-base damage, was observed. A moderate amount (approximately 6,038 linear feet) of random longitudinal and transverse cracking was observed throughout the asphalt. We have scheduled the repairs progressively throughout the service life of the asphalt. Repairs are essential in order to achieve the projected service life of the pavement. Full-depth repairs and crack filling are scheduled every six years throughout the study period, including the year of the asphalt restoration project.**
2 SITE FEATURES																
2.1	**Entrance Monument**	**1**	**LS**	**$7,600.00**	**$7,600**	**20**	**2015**	**15%**	**$1,140**	**2035**	**100%**	**$12,453**				**A limestone entrance monument with a painted wood name sign is constructed at the entrance. The monument has two bollards with a connecting wall. The monument appears to be in fair condition with some loose and missing stones observed. We have scheduled a repair project near-term. Repairing the monument as needed will be critical to insuring a full service life is achieved.**
2.2	**Street & Informational Signage**	**27**	**EA**	**$145.00**	**$3,915**	**10**	**2015**	**25%**	**$979**	**2020**	**25%**	**$1,107**	**2025**	**25%**	**$1,253**	**Approximately 27 standard metal signs on about 15 posts are mounted strategically throughout the community. Most posts and signs appear to be in good, serviceable condition. Out of plumb posts can be straightened under the operations budget.**
2.3	**Storm Water Drainage System Allowance**	**1**	**LS**	**$10,500.00**	**$10,500**	**7**	**2022**	**100%**	**$12,481**	**2029**	**100%**	**$14,836**	**2036**	**100%**	**$17,636**	**Storm water drainage is provided by concrete yard drains, drainage swales, culverts, and underground structures leading water to seven storm water detention ponds. All observable components appear to be in good condition. Though storm water drainage systems are a long life component and catastrophic failure is not anticipated, it is prudent to plan for localized repairs and repairs to ancillary damage as the system ages. This category may also be used to address localized erosion and drainage issues.**

CALENDAR OF EXPENDITURES
TABLE 2 EXPLANATION

This table is a yearly plan of action of replacements and costs. A description of the columns in the table follows:

Column 1	Year is the year of the projected replacement and expenditure.
Column 2	Component No. itemizes the components and is consistent throughout the tables.
Column 3	Component is a brief description of the component.
Column 4	Present Cost is the cost for the cycle in today's dollars.
Column 5	Future Cost (Inflated) is the cost for the cycle in future dollars.
Column 6	Total Annual Expenditures gives the total expenditures by year.
Column 7	Action is an area provided for the Board to make notations as to action taken on each component.

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Reserve Fund Plan for
BENTWOOD ESTATES HOMEOWNERS ASSOCIATION, INC.
Inwood, West Virginia

CALENDAR OF EXPENDITURES
TABLE 2
2015 Through 2034

MASON & MASON
CAPITAL RESERVE ANALYSTS, INC.
www.masonreserves.com 800-776-6980 Fax 800-776-6408

YEAR	COMPONENT NO.	COMPONENT	PRESENT COST 2015	FUTURE COST (INFLATED)	TOTAL ANNUAL EXPENDITURES	ACTION
1	2	3	4	5	6	7
2015					2015	
	2.1	Entrance Monument	$1,140	$1,140	TOTAL EXPENDITURES	
	2.2	Street & Informational Signage	$979	$979		
					$2,119	
2016					2016	
					NO EXPENDITURES	
2017					2017	
					NO EXPENDITURES	
2018					2018	
					NO EXPENDITURES	
2019					2019	
					NO EXPENDITURES	
2020					2020	
	2.2	Street & Informational Signage	$979	$1,107	TOTAL EXPENDITURES	
					$1,107	
2021					2021	
					NO EXPENDITURES	
2022					2022	
	1.2	Asphalt Repair Allowance	$13,200	$15,691	TOTAL EXPENDITURES	
	2.3	Storm Water Drainage System Allowance	$10,500	$12,481		
					$28,172	
2023					2023	
					NO EXPENDITURES	
2024					2024	
					NO EXPENDITURES	
2025					2025	
	2.2	Street & Informational Signage	$979	$1,253	TOTAL EXPENDITURES	
					$1,253	
2026					2026	
					NO EXPENDITURES	
2027					2027	
					NO EXPENDITURES	
2028					2028	
	1.2	Asphalt Repair Allowance	$26,400	$36,393	TOTAL EXPENDITURES	
					$36,393	
2029					2029	
	2.3	Storm Water Drainage System Allowance	$10,500	$14,836	TOTAL EXPENDITURES	
					$14,836	
2030					2030	
	2.2	Street & Informational Signage	$1,958	$2,835	TOTAL EXPENDITURES	
					$2,835	
2031					2031	
					NO EXPENDITURES	
2032					2032	
					NO EXPENDITURES	
2033					2033	
					NO EXPENDITURES	
2034					2034	
	1.1	Asphalt Restoration Project	$236,136	$377,499	TOTAL EXPENDITURES	
	1.2	Asphalt Repair Allowance	$40,000	$63,946		
					$441,445	

CURRENT FUNDING ANALYSIS CASH FLOW METHOD
TABLE 3.0 EXPLANATION

and, if applicable,

ALTERNATIVE FUNDING ANALYSIS CASH FLOW METHOD
TABLE 3.1, 3.2, 3,3 (etc.) EXPLANATION

Table 3.0 shows the financial picture over the twenty-year study period, using the current annual contribution and the reserve fund balance reported at the beginning of the study year. If the results of the study indicate a need to increase the annual contribution to maintain adequate balances throughout the study period, Table 3.1, and possibly, 3.2 will be provided for consideration. Alternatives might also be provided if a community is over-funded and desires to adjust the annual contribution downward.

Alternative funding may be achieved by increasing the annual contribution to a fixed yearly amount or by applying an annual escalation factor to increase contributions over time, or a combination of both methods. An inflation factor and interest income factor may be included in the calculations on this page.

A description of the columns in the table follows:

Column 1	Year
Column 2	**Total Asset Base** of all common capital assets included in the reserve fund with costs adjusted for inflation.
Column 3	**Beginning Reserve Fund Balance** is the reserve fund balance after all activity in the prior year is completed.
Column 4	**Annual Contribution**, on Table 3, is the amount contributed annually to the reserve fund as reported by the Board of Directors. On the Alternative Funding Analysis tables (3.1, 3.2, etc.), the annual contribution is projected to maintain positive balances throughout the study period.
Column 5	**Interest Income**, which is indicated in the heading of the table, is applied to the reserve fund balance and is accrued monthly throughout each year after the yearly expenditures are deducted. The interest income percentage may be varied to reflect actual experience of the community investments.
Column 6	**Capital Expenditures** are annual totals of expenditures for each year of the study period adjusted by the inflation percentage listed in the heading of the table.
Column 7	**Ending Reserve Fund Balance** is the result of the beginning reserve fund balance plus the annual contribution, plus interest income, less capital expenditures for the year.
Column 8	**Balance to Asset Base Ratio**, expressed as a percentage, is the ratio between the ending reserve fund balance and the total asset base for that year. The ratio is useful to the analysts in understanding general financial condition, but there is no standard ratio as each community's condition and complexity varies.

Reserve Fund Plan for
BENTWOOD ESTATES HOMEOWNERS
ASSOCIATION, INC.
Inwood, West Virginia

FUNDING ANALYSIS
HYBRID APPROACH
CASH FLOW METHOD
TABLE 3

MASON & MASON
CAPITAL RESERVE ANALYSTS, INC.
www.masonreserves.com 800-776-6980 Fax 800-776-6408

In Dollars

Beginning Reserve Fund Balance:	Annual Contribution To Reserves:	Contribution Percentage Increase:	Annual Inflation Factor:	Annual Interest Income Factor:
0	21,574	2.50%	2.50%	1.00%

YEAR	TOTAL ASSET BASE	BEGINNING RESERVE FUND BALANCE	ANNUAL CONTRIBUTION	INTEREST INCOME	CAPITAL EXPENDITURES	ENDING RESERVE FUND BALANCE
1	2	3	4	5	6	7
2015	298,151	0	21,574	106	2,119	19,561
2016	305,605	19,561	22,114	317	0	41,991
2017	313,245	41,991	22,667	545	0	65,203
2018	321,076	65,203	23,233	781	0	89,217
2019	329,103	89,217	23,814	1,026	0	114,057
2020	337,330	114,057	24,409	1,272	1,107	138,632
2021	345,764	138,632	25,020	1,529	0	165,180
2022	354,408	165,180	25,645	1,646	28,172	164,299
2023	363,268	164,299	26,286	1,793	0	192,379
2024	372,350	192,379	26,943	2,079	0	221,401
2025	381,658	221,401	27,617	2,367	1,253	250,132
2026	391,200	250,132	28,307	2,667	0	281,106
2027	400,980	281,106	29,015	2,982	0	313,103
2028	411,004	313,103	29,740	3,110	36,393	309,560
2029	421,280	309,560	30,484	3,195	14,836	328,403
2030	431,812	328,403	31,246	3,454	2,835	360,268
2031	442,607	360,268	32,027	3,793	0	396,088
2032	453,672	396,088	32,828	4,157	0	433,073
2033	465,014	433,073	33,649	4,533	0	471,255
2034	476,639	471,255	34,490	2,527	441,445	66,827
STUDY PERIOD TOTALS			551,109	43,878	528,160	

FULLY FUNDED BALANCE GOAL

FUNDING ANALYSIS COMPONENT METHOD
TABLE 4 EXPLANATION

Table 4 is a yearly list of annual contributions toward each component, which must be made to achieve 100% funding. The reserve fund balance is the balance at the beginning of the study year. The beginning reserve fund balance is applied, proportionately, to each component prior to calculating the yearly contribution for each component. Future costs (inflation) are factored into the replacement cycles. The annual contribution for each year is calculated in the bottom row of the study labeled Annual Component Contribution Totals. Interest and inflation are calculated at the same annual rates as the Cash Flow Method (Table 3).

Column 1	Component Number is consistent throughout the tables.
Column 2	Component is a brief description of the component.
Columns 3 - 22	Years lists the annual contribution amount toward each component throughout the twenty-year study period, which is totaled at the bottom of the component table.

COMPONENT METHOD SUMMARY

The component method summary computes the beginning reserve fund balance, the annual component contribution, the annual expenditures, and interest income. It then provides the ending reserve fund balance for each year of the study.

Reserve Fund Plan for
BENTWOOD ESTATES HOMEOWNERS
ASSOCIATION, INC.
Inwood, West Virginia

FUNDING ANALYSIS
COMPONENT METHOD
TABLE 4

MASON & MASON
CAPITAL RESERVE ANALYSTS, INC.
www.masonreserves.com 800-776-6980 Fax 800-776-6408

Beginning Reserve Fund Balance: **0**

In Dollars

Component Number	COMPONENT	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
1 ASPHALT COMPONENTS																					
1.1	Asphalt Restoration Project	18,034	18,034	18,034	18,034	18,034	18,034	18,034	18,034	18,034	18,034	18,034	18,034	18,034	18,034	18,034	18,034	18,034	18,034	18,034	29,843
1.2	Asphalt Repair Allowance	2,163	2,163	2,163	2,163	2,163	2,163	2,163	5,883	5,883	5,883	5,883	5,883	5,883	10,337	10,337	10,337	10,337	10,337	10,337	3,956
2 SITE FEATURES																					
2.1	Entrance Monument	1,696	562	562	562	562	562	562	562	562	562	562	562	562	562	562	562	562	562	562	562
2.2	Street & Informational Signage	1,189	216	216	216	216	244	244	244	244	244	553	553	553	553	553					
2.3	Storm Water Drainage System Allowance	1,721	1,721	1,721	1,721	1,721	1,721	1,721	2,045	2,045	2,045	2,045	2,045	2,045	2,045	2,431	2,431	2,431	2,431	2,431	2,431
ANNUAL COMPONENT CONTRIBUTION TOTALS		24,803	22,696	22,696	22,696	22,696	22,724	22,724	26,768	26,768	26,768	27,077	27,077	27,077	31,531	31,917	31,364	31,364	31,364	31,364	36,792

COMPONENT METHOD SUMMARY	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
BEGINNING RESERVE FUND BALANCE	0	22,819	45,867	69,147	92,661	116,412	139,321	163,569	163,953	192,514	221,361	249,556	279,287	309,317	307,734	328,080	360,075	395,227	430,731	466,593
PLUS ANNUAL COMPONENT CONTRIBUTION	24,803	22,696	22,696	22,696	22,696	22,724	22,724	26,768	26,768	26,768	27,077	27,077	27,077	31,531	31,917	31,364	31,364	31,364	31,364	36,792
CAPITAL EXPENDITURES	2,119	0	0	0	0	1,107	0	28,172	0	0	1,253	0	0	36,393	14,836	2,835	0	0	0	441,445
SUBTOTAL	22,684	45,515	68,563	91,843	115,357	138,029	162,045	162,165	190,721	219,282	247,185	276,633	306,364	304,455	324,815	356,609	391,439	426,591	462,095	61,940
PLUS INTEREST INCOME @ 1.00%	135	353	584	818	1,054	1,293	1,523	1,789	1,793	2,079	2,371	2,654	2,953	3,279	3,265	3,466	3,788	4,141	4,498	4,887
FULLY FUNDED RESERVE FUND BALANCE	22,819	45,867	69,147	92,661	116,412	139,321	163,569	163,953	192,514	221,361	249,556	279,287	309,317	307,734	328,080	360,075	395,227	430,731	466,593	66,827

PERCENT FUNDED FOR CURRENT CYCLE	100%
TOTAL EXPENDITURES	528,160
TOTAL CONTRIBUTIONS	548,266
STUDY PERIOD TOTAL INTEREST	46,721
AVERAGE ANNUAL CONTRIBUTION	27,413

FULLY FUNDED BALANCE GOAL

PHOTOGRAPHS
WITH
DESCRIPTIVE NARRATIVES

MASON & MASON
CAPITAL RESERVE ANALYSTS, INC.

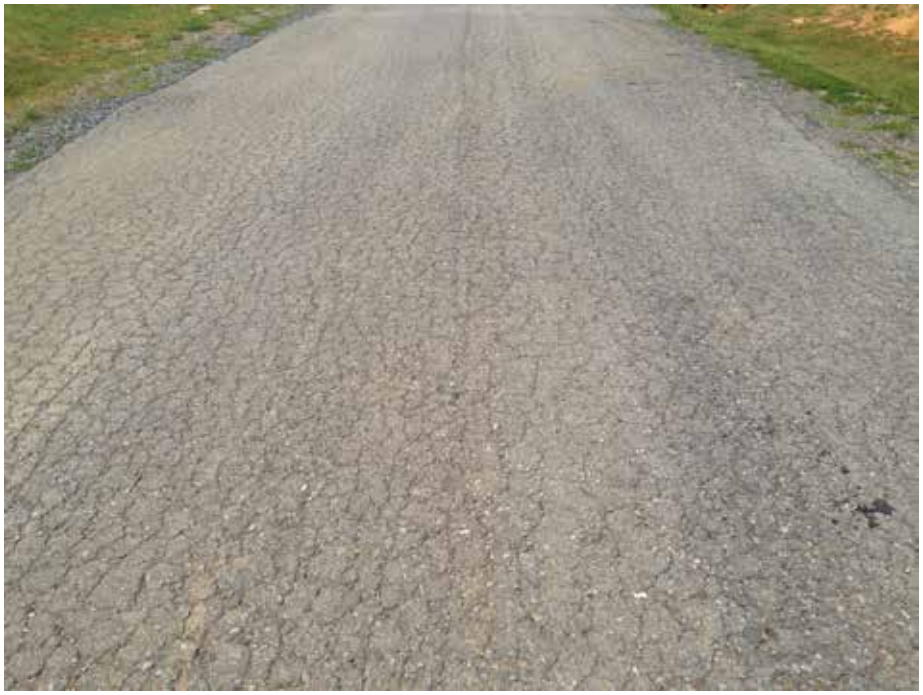

PHOTO #1
Alligator cracking is indicative of sub base failure due to insufficient base thickness and/or inadequately compacted sub-base. We observed wide area failure of the base course throughout all drivelanes. It is critical that the sub-base and base course be repaired prior to the paving of the wear course or reflective cracking and premature failure will occur.

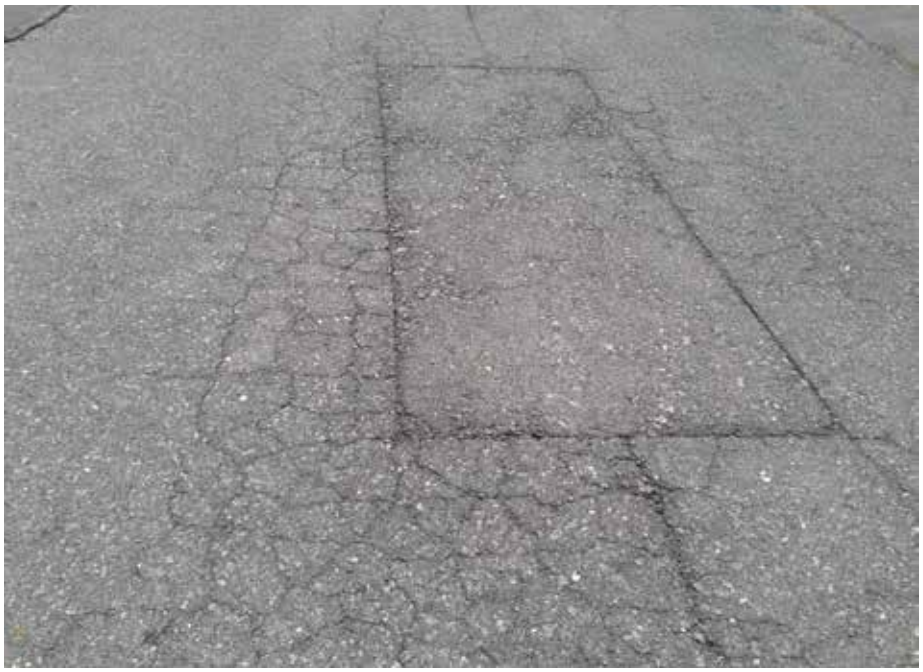

PHOTO #2
Some areas of full-depth repair were observed. However, generally, the repairs were insufficient. We recommend a professional engineer be consulted to further determine the cost and extent of repairs required to ensure that a full service life of the asphalt is achieved.

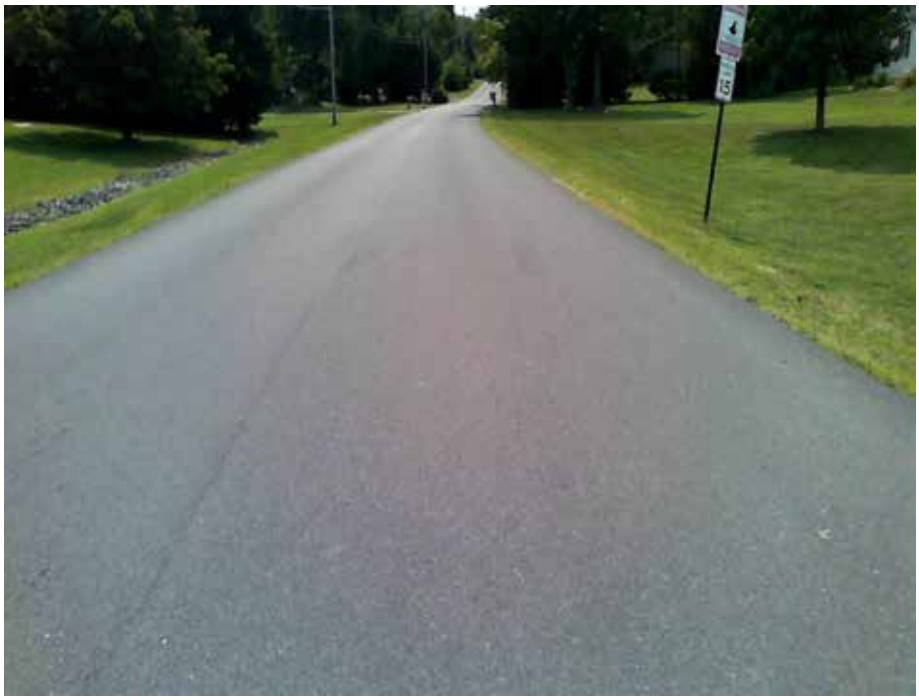

PHOTO #3
The surface course along the first section Bentley Drive appears to be in very good condition with no cracking or deflection observed. This sections should be monitored closely as it may be a good indicator of how the other sections will age over time. Full-depth repairs and crack filling should be conducted routinely throughout the study period.

PHOTO #4
The wood sign attached to the entrance monument appears to be in very good condition. Routine panting projects, conducted under the operations budget, will help ensure the sign achieves a full service life.

PHOTO #5
The limestone monument is in fair condition with some loose and missing stones. Repairs should be conducted near-term to avoid further damage to the monument.

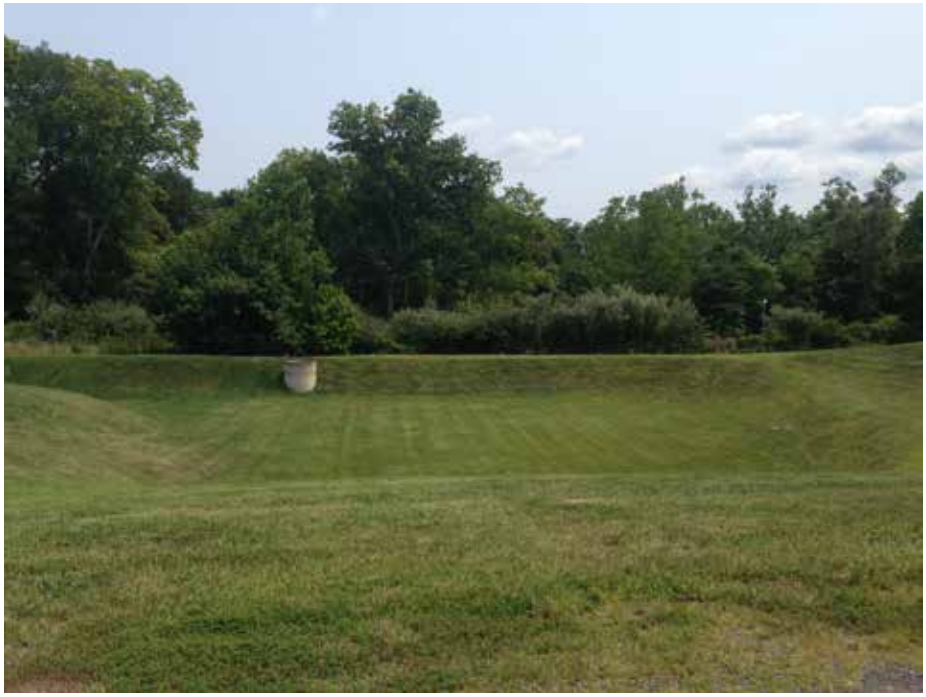

PHOTO #6
The storm water drainage system appears to be properly sized for the location. No areas of erosion were observed.